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› GOWE 3KW/3000W Modified Sine Wave Power Inverter User Manual

GOWE GWE-1012002

GOWE 3KW/3000W Modified Sine Wave Power Inverter User Manual

Model: GWE-1012002 | Brand: GOWE

1. PRODUCT OVERVIEW

The GOWE 3KW/3000W Modified Sine Wave Power Inverter is designed to convert DC (Direct Current) power from a battery source into AC (Alternating Current) power, suitable for operating various electronic devices and appliances. This inverter supports multiple DC input voltages (12V, 24V, or 48V) and provides AC output at 110V or 220V, with a frequency of 50/60Hz. It is equipped with essential safety features to ensure reliable operation.



Figure 1: Front view of the GOWE 3KW/3000W Modified Sine Wave Power Inverter. This image displays the main unit with its branding and power specifications.

2. KEY FEATURES

- **Dual AC Outlet:** Provides two AC outlets for connecting multiple devices.
- **Four-Prong Grounded DC Input:** Ensures secure and stable DC power connection.
- **Broad Application Compatibility:** Suitable for household appliances (compact microwave ovens, bread makers, food processors, small bar refrigerators, small vacuum cleaners, fluorescent and incandescent lights, sewing machines, fans), power tools (drills, jigsaws, sanders, buffers), entertainment electronics (televisions, VCRs, video games, stereos, musical instruments, satellite equipment), and office equipment (computers with 17+/- monitors, printers, facsimile machines).
- **Over-Temperature Protection:** Automatically shuts down the inverter if it overheats.
- **Low Battery Voltage Alarm & Shutdown:** Alerts the user and shuts down the inverter when battery voltage drops below a safe operating level.
- **High Battery Voltage Shutdown:** Protects the inverter and connected devices from excessively high input voltage.
- **Overload Protection:** Prevents damage by shutting down if the connected load exceeds the inverter's capacity.
- **Short Circuit Protection:** Safeguards against short circuits in the output.
- **Polarity Reverse Connection Protection:** Protects the inverter from damage due to incorrect battery terminal connections.



Figure 2: The GOWE Power Inverter shown with its included accessories, such as battery connection cables and the user manual.

3. TECHNICAL SPECIFICATIONS

Parameter	Value
Continuous Power	3KW (3000W)
Surge Capability	6KW (6000W)
Output Voltage	100/110/120VAC or 220/230/240 VAC
Output Waveform	Modified Sine Wave
DC Input Voltage	12VDC, 24VDC, or 48VDC (model dependent)
Efficiency	>85%

Parameter	Value
Low Input Voltage Protection	10.6±0.5V (12V), 21.5±1.2V (24V), or 40.4±2.4V (48V)
Low Input Voltage Warning	10±0.5V (12V), 20±1V (24V), or 40±2V (48V)
Output Overloading Protection	3100W-3200W
Cooling Fan	Yes
Inverter Size (L*W*H)	485*190*190mm
Weight	3800g (approx. 8.38 lbs)
Manufacturer	Gowegroup
Part Number	GWE-1012002

Continuous Power	3KW
Surge capability	6KW
Output Voltage	100/110/120VAC or 220/230/240 VAC
Output Waveform	Modified Sine Wave
DC Input Voltage	12DC/24VDC/48VDC
Efficiency	>85%
Low input voltage protection	10.6±0.5V Or 21.5±1.2V Or 40.4±2.4V
Low input voltage warning	10±0.5V Or 20±1V Or 40±2V
Output overloading protection	3100W~3200W
With cooling fan	Yes
Inverter Size	485*190*190mm(L*W*H)
Weight	3800g
Packing Details	525*420*220mm 2Pcs/ctn 10kg
OEM & ODM	YES

Figure 3: A detailed table outlining the technical specifications of the GOWE Power Inverter, including power ratings, voltage, and dimensions.

4. SAFETY INFORMATION

Read all instructions and warnings before operating this inverter. Failure to follow these instructions may result in electrical shock, fire, or serious injury.

- Ensure the inverter is placed in a well-ventilated area, away from direct sunlight, heat sources, and flammable materials.
- Do not expose the inverter to water, rain, or excessive moisture.
- Connect the inverter only to a DC power source with the correct voltage (12V, 24V, or 48V) as specified for your model. Incorrect voltage can damage the inverter.
- Always connect the inverter to the battery with correct polarity (positive to positive, negative to negative). The inverter includes polarity reverse connection protection, but incorrect connection should still be avoided.

- Ensure all connections are tight and secure to prevent arcing and overheating.
- Do not attempt to open or modify the inverter. There are no user-serviceable parts inside.
- Keep children away from the inverter during operation.
- Disconnect the inverter from the battery before performing any maintenance or cleaning.

5. SETUP AND INSTALLATION

1. **Choose a Location:** Select a dry, cool, and well-ventilated location for the inverter. Ensure there is sufficient space around the unit for air circulation, especially around the cooling fan vents.
2. **Prepare the Battery:** Ensure your battery bank matches the DC input voltage of your inverter (12V, 24V, or 48V). Turn off any loads connected to the battery.
3. **Connect DC Input Cables:**
 - Connect the positive (+) cable (typically red) from the battery to the positive (+) terminal on the inverter.
 - Connect the negative (-) cable (typically black) from the battery to the negative (-) terminal on the inverter.
 - Ensure connections are tight and secure. The inverter features a four-prong grounded DC input for enhanced safety.
4. **Select Output Socket Type:** The inverter supports various output socket types. Ensure the correct type is selected or provided with your unit based on your regional requirements.

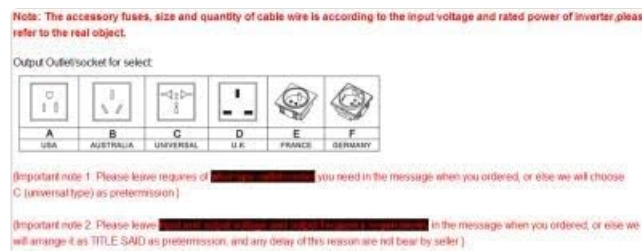


Figure 4: Illustration of different output socket types available for the inverter, including USA (Type A), Australia (Type B), Universal (Type C), UK (Type D), France (Type E), and Germany (Type F).

5. **Connect AC Appliances:** Once the inverter is powered on (see Operating Instructions), you can plug your AC appliances into the inverter's AC outlets. Ensure the total wattage of connected appliances does not exceed the inverter's continuous power rating (3000W).

6. OPERATING INSTRUCTIONS

1. **Power On:** After all connections are secure, turn on the inverter using its power switch. The indicator lights (if present) should illuminate, indicating the inverter is operational.
2. **Connect Loads:** Plug your AC appliances into the inverter's AC outlets. Start with smaller loads first, then connect larger loads.
3. **Monitor Performance:** Pay attention to any alarms (e.g., low battery voltage alarm) or automatic shutdowns (e.g., overload protection, over-temperature protection). These indicate a condition that needs attention.
4. **Power Off:** Before disconnecting any appliances or the inverter from the battery, turn off the inverter using its power switch.

Load Considerations: The inverter has a continuous power rating of 3000W and a surge capability of 6000W. Appliances with motors (e.g., refrigerators, pumps, power tools) often have a high starting (surge) current. Ensure the surge rating of your appliance does not exceed the inverter's surge capability.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your inverter.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Do not use liquid cleaners or solvents. Ensure cooling vents are free from dust and debris.
- **Connection Check:** Regularly inspect all DC and AC connections to ensure they are tight and free from corrosion. Loose connections can cause overheating and poor performance.
- **Ventilation:** Ensure the area around the inverter remains clear and well-ventilated to prevent overheating. The built-in cooling fan will activate as needed.
- **Battery Health:** Maintain your battery bank according to the battery manufacturer's instructions. A healthy battery is crucial for inverter performance.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your inverter.

Problem	Possible Cause	Solution
Inverter does not turn on.	No DC input power; Loose battery connections; Blown fuse (internal).	Check battery voltage and connections. Ensure power switch is ON. If internal fuse is suspected, contact support.
Low battery voltage alarm sounds.	Battery voltage is too low.	Recharge or replace the battery. Reduce load on the inverter.
Inverter shuts down (overload protection).	Connected load exceeds inverter's continuous or surge rating.	Reduce the total wattage of connected appliances. Disconnect and reconnect loads one by one.
Inverter shuts down (over-temperature protection).	Inverter is overheating due to poor ventilation or excessive load.	Ensure adequate ventilation around the inverter. Reduce load. Allow inverter to cool down before restarting.
No AC output.	Inverter is off; Fault condition (e.g., short circuit, overload); Appliance fault.	Check inverter power switch. Check for fault indicators. Test appliance with another power source.

9. WARRANTY AND SUPPORT

Specific warranty details for the GOWE 3KW/3000W Modified Sine Wave Power Inverter are not provided within this manual. Please refer to your purchase documentation, the product packaging, or the official GOWE website for comprehensive warranty information and customer support contacts.

For technical assistance or inquiries, please contact GOWE customer service through the channels provided at the point of purchase or on the manufacturer's official website.

Manufacturer: Gowegroup

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